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Joint asymptotic distribution of marginal quantiles and quantile functions in samples from a multivariate population.
The joint asymptotic distribution of marginal quantiles and quantile functions in samples from a multivariate population is derived. Of particular interest is the joint asymptotic distribution of the marginal sample medians, which is then used to develop tests of significance for population medians. Using suitable scaling, the weak limits of the entirety of marginal quantile processes are also obtained. The method of proof of the latter result combines strong approximation results with the technique of weak convergence of Banach-space-valued random variables to a Gaussian measure.  M. Csorgo (3-CARL)